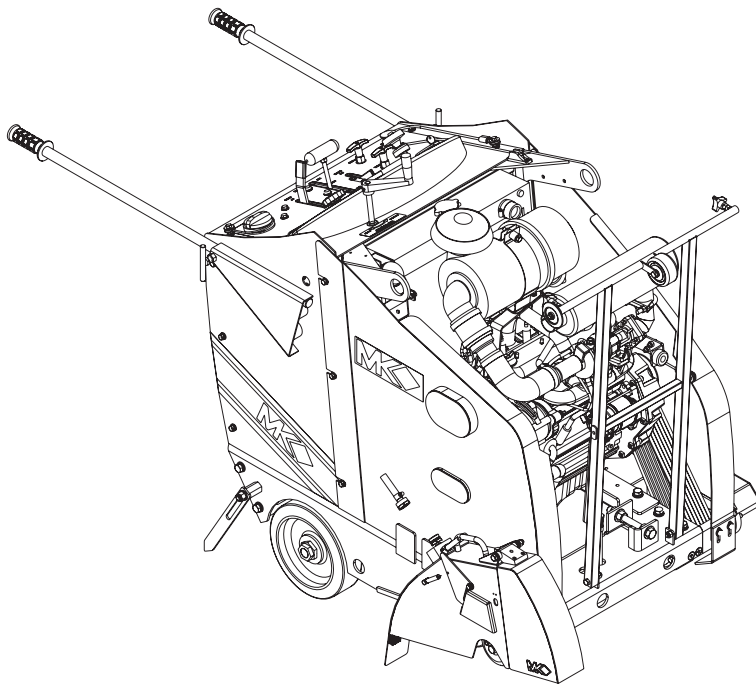
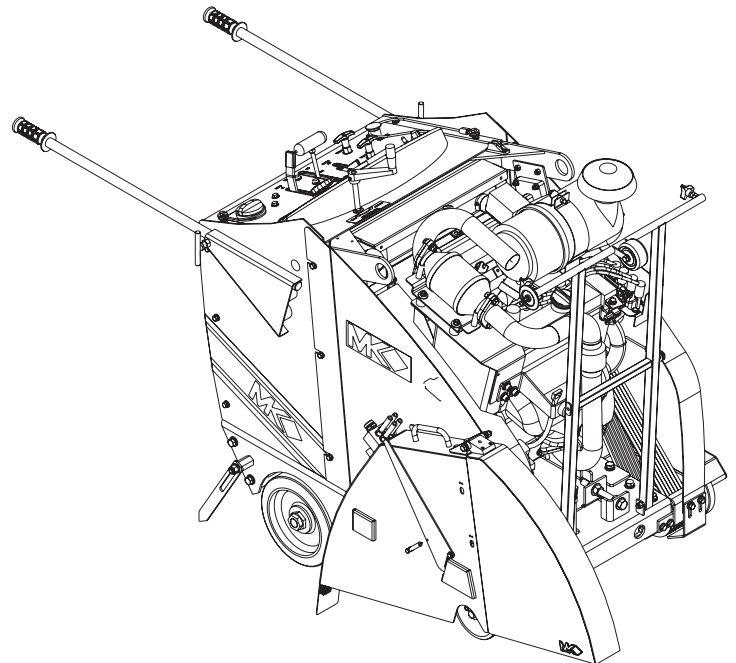


MK-4000 SERIES CONCRETE SAW OPERATOR'S MANUAL

MODELS: MK-4018KB, MK-4018HY
MK-4024KB, MK-4024HY
MK-4030KB, MK-4030HY
MK-4036KB, MK-4036HY



MK-4018KB
Kubota
Diesel Engine



MK-4036HY
Hyundai
Gas Engine

Revision 100	01.2010
Manual Part No. 168118	

Caution: Read all safety and operating instructions before using this equipment. This parts list **MUST** accompany the equipment at all times.

INTRODUCTION

Congratulations on your purchase of a MK-4000 Concrete Saw. We are certain that you will be pleased with your purchase. MK Diamond takes pride in producing the finest construction power tools and diamond blades in the industry.

Operated correctly, your MK-4000 Concrete Saw should provide you with years of service. In order to help you, we have included this manual. This owners manual contains information necessary to operate and maintain your MK-4000 Concrete Saw safely and correctly. Please take the time to familiarize yourself with the MK-4000 Concrete Saw by reading and reviewing this manual.

Read and follow all safety, operating and maintenance instructions.

If you should have questions concerning your MK-4000 Concrete Saw, please feel free to call our friendly customer service department at: 800 421-5830

Regards,

MK Diamond

NOTE THIS INFORMATION FOR FUTURE USE:

MODEL NUMBER:	
SERIAL NUMBER:	
PURCHASE PLACE:	
PURCHASE DATE:	

NOTE: For your (1) one year warranty to be effective, complete the warranty card (including the Serial Number) and mail it in as soon as possible.

MK-4000 CONCRETE SAW


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Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Precaution and Operating Instructions could result in injury to yourself and others.

This Operator's Manual has been developed to provide complete instructions for the safe and efficient operation of the MK-4000 Concrete Saw.

Before using this machine, ensure that the person operating the machine has read and understands all instructions in this manual.

SAFETY MESSAGE / ALERT SYMBOLS

A safety message alerts you to potential hazards that could hurt you or others. Each safety message is preceded by a safety alert symbol () and one of three words: **DANGER**, **WARNING**, or **CAUTION**.



DANGER

You **WILL** be **KILLED** or **SERIOUSLY INJURED** if you do not follow directions.



WARNING

You **CAN** be **KILLED** or **SERIOUSLY INJURED** if you do not follow directions.



CAUTION

You **CAN** be **INJURED** if you do not follow directions. It may also be used to alert against unsafe practices.

Each message tells you what the hazard is, what can happen, and what you can do to avoid or reduce injury. Other important messages are preceded by the word **NOTICE**.



NOTICE

You can cause **PROPERTY DAMAGE** to your machine if you don't follow directions.

The safety labels should be periodically inspected and cleaned by the user to maintain good legibility at a safe viewing distance. If the label is worn, damaged or illegible, it should be replaced.

SAFETY WARNINGS

SILICA DUST WARNING:

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow respiratory precautions.

CALIFORNIA PROPOSITION 65 MESSAGE:

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contain chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead, from lead-based paints
- Crystalline silica, from bricks and cement and other masonry products
- Arsenic and chromium, from chemically treated lumber

For further information, consult the following sources:

<http://www.osha.gov/SLTC/silicacrystalline/index.html>

http://www.oehha.org/prop65/out_of_date/6022kLstA.html

Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

RULES FOR SAFE OPERATION



DANGER

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the MK-4000 Concrete Saw.

MAINTENANCE SAFETY

- **NEVER** lubricate components or attempt service on a running machine.
- Keep the machinery in proper running condition. Clean the machine after each day's use. Follow instructions for changing accessories. Inspect tool periodically and, if damaged, have repaired by authorized service facility.

SET UP & TRANSPORTATION SAFETY

- **ALWAYS** use caution and follow the instructions when lifting and transporting this machine.
- **ALWAYS** tie down the machine when transporting. **DO NOT** tow this machine behind a vehicle.
- **NEVER** transport with the blade mounted on the machine.
- Lift only from the lift bail.

GENERAL SAFETY



- **DO NOT** operate or service this equipment before reading this entire manual. Read and understand all warnings, instructions and controls on the machine.

- This equipment should not be operated by persons under 18 years of age.



- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.

- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate this equipment under the influence of drugs or alcohol.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.
- **ALWAYS** check the machine for loose bolts before starting.



- **ALWAYS** wear proper respiratory, head, ear and eye protection equipment when operating this machine.

- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.



- **NEVER** leave the machine unattended. Turn off machine when unattended. Know how to stop the machine quickly in case of emergency.
- **NEVER** try to stop a moving blade with your hand.
- **NEVER** use a wet blade without adequate water supply to the blade.
- **CAUTION** must be observed while servicing the machine. Rotating parts can cause injury if contacted. Have all service performed by competent service personnel.
- Operate this machine only in well ventilated areas. **ALWAYS** ensure that the machine is on level ground before using.



- **NEVER** operate this machine in an explosive atmosphere.
- Establish a training program and give a copy of this manual to operators of this equipment. If you need extra copies, call TOLL-FREE (800) 421-5830.

SAW BLADE SAFETY

For complete safety information, refer to ANSI Safety Code B7.1 available through the American National Standards Institute.



- **ALWAYS** keep area around the machine clear of obstructions and clear the work area of unnecessary people. Keep all body parts away from the blade and all other moving parts.



- Before starting the machine, check that all guards are in position and correctly fitted. **NEVER** allow blade exposure from the guard to be more than 180 degrees. **DO NOT** operate this machine with any guard removed.
- Inspect the blade, flanges and shafts for damage before installing the blade. **NEVER** use damaged or worn blade flanges.
- The blade shaft flanges must be of proper diameter for the size blade being used.
- Inspect the blade, flanges and size shown for each blade size. **DO NOT** exceed maximum blade speed shown, as excessive speed could result in blade breakage. Use **ONLY** blades marked with a maximum operating speed greater than the blade shaft speed. Verify speed and saw drive configuration by checking blade shaft RPM and pulley diameters and blade flange diameters.
- Use the correct blade for the type of work being done. Use only reinforced abrasive blades or steel center diamond blades and flanges supplied with the saw or manufactured for use on concrete saws. **DO NOT** use carbide-tipped blades. Check with the blade manufacturer if you do not know if blade is correct.
- Make sure the blade and flanges are clean and free of dirt and debris before mounting the blade on the saw. Verify the blade arbor hole matches the machine spindle before mounting the blade. **ALWAYS** mount the blade solidly and firmly. Wrench tighten the arbor nut.

- Make sure the blade is not contacting anything before starting the engine.
- **ALWAYS** cut in a straight line. **DO NOT** cut deeper than 1" per pass with a dry blade. Step cut to achieve deeper cuts. **NEVER** cock, jam wedge or twist the blade in a cut. **DO NOT** grind on the side of the blade.
- **DO NOT** touch a dry cutting blade immediately after use. These blades require several minutes to cool after each cut. **DO NOT** use a blade that has been overheated (Core has a bluish color).



FUELING SAFETY



- **ALWAYS** use caution when handling fuel. Shut off the engine and allow to cool before refueling.
- Move the machine at least 10 feet (3 meters) from the fueling point before starting the engine and make sure the gas cap is on the machine and the fuel can is properly tightened.

OPERATION & SAFETY DECALS

The MK-4000 is equipped with a number of safety decals provided for operator safety and maintenance information. Should any of these decals become unreadable, replacements can be obtained by calling **(800) 262-1575**.



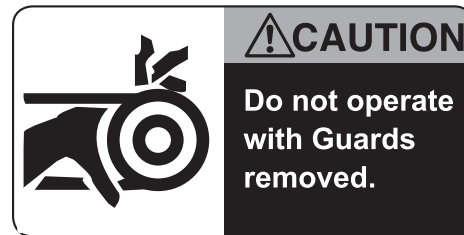
Decal A



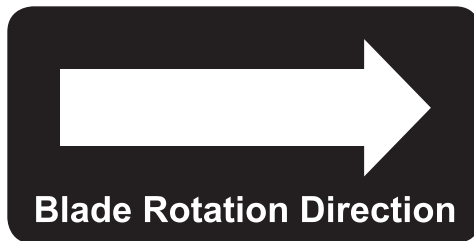
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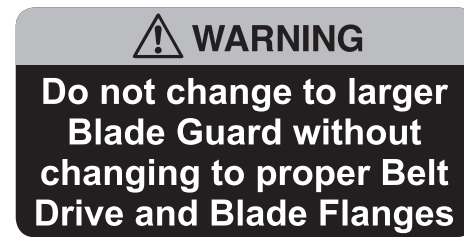
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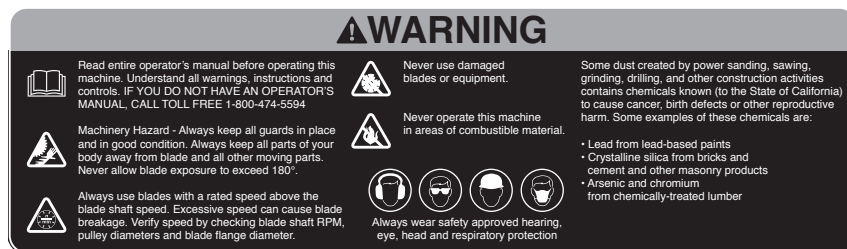
Decal D, E & G



Decal F



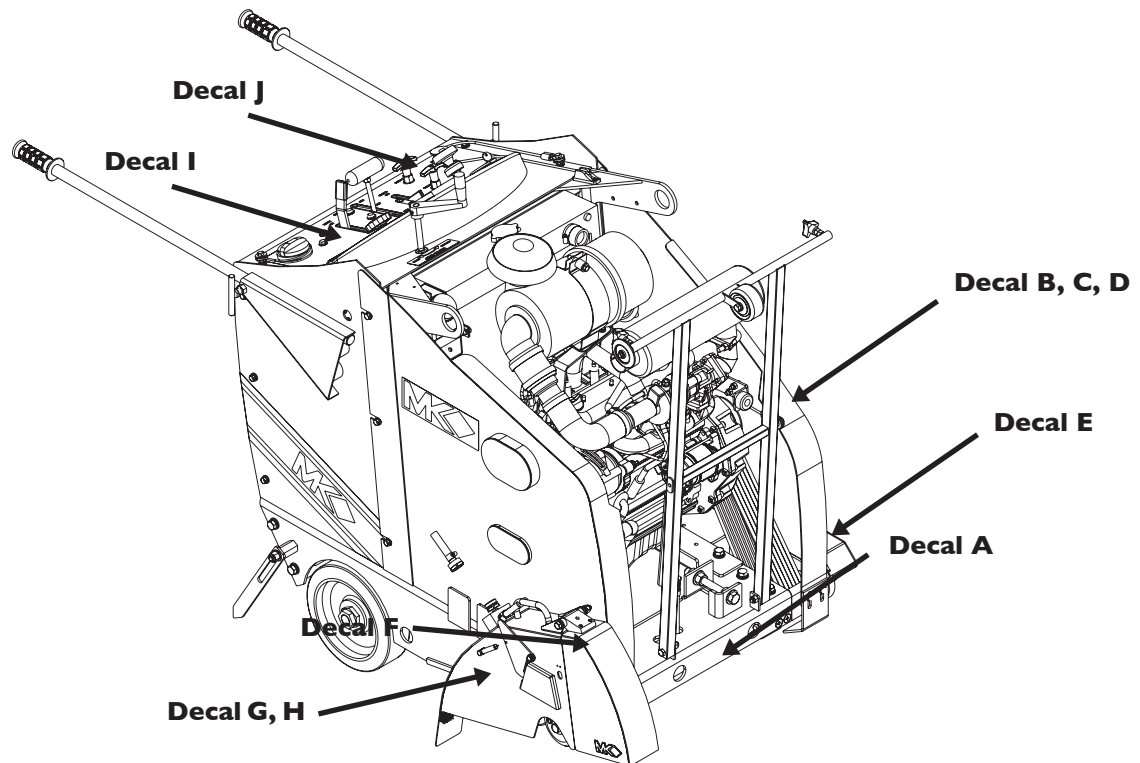
Decal H



Decal I



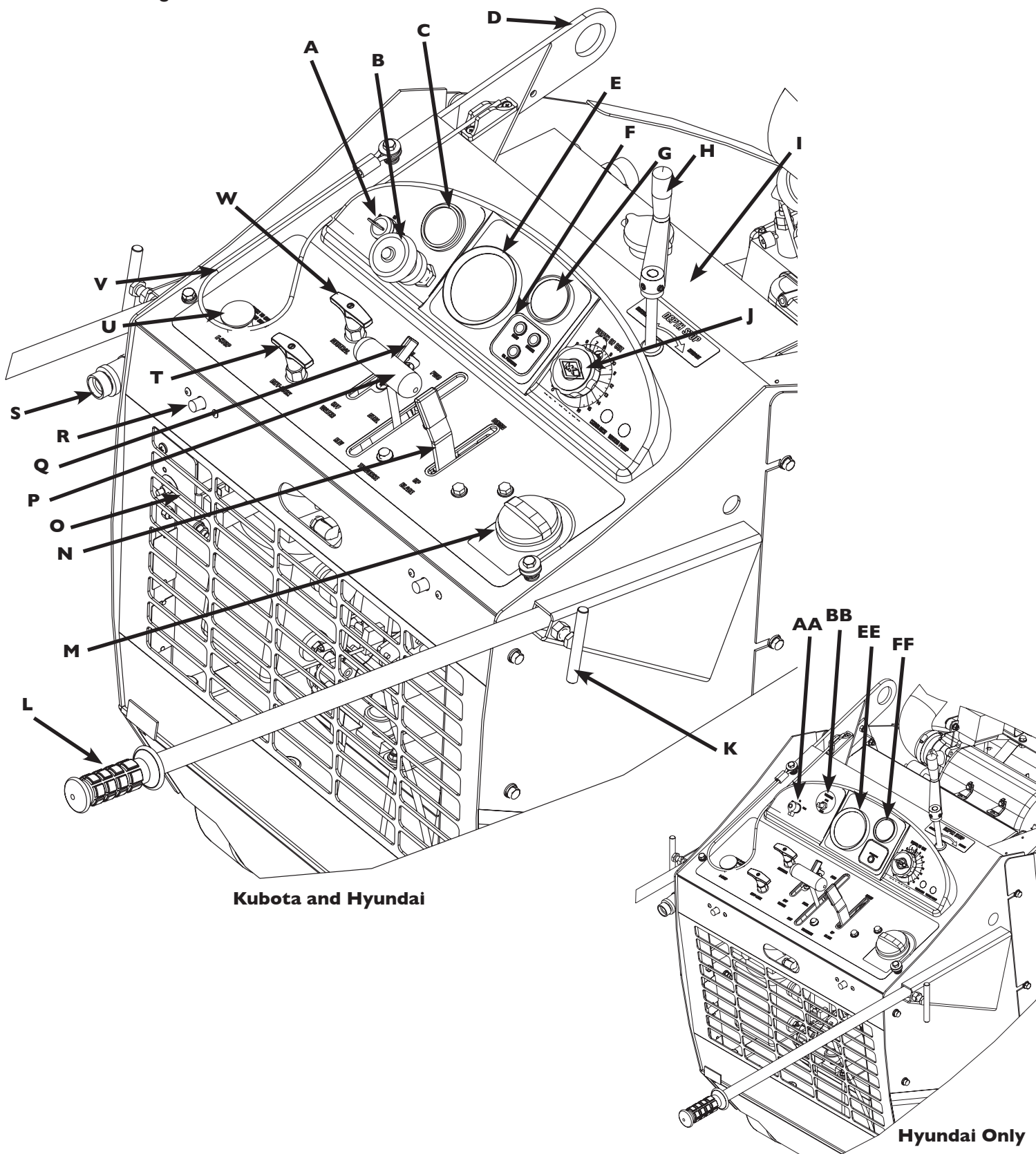
Decal J

SAFETY DECAL LOCATIONS**MK-4000 Safety Decal Locations**

Decal	Location	Description
A	Machine Front	Caution Keep Hands and Feet Clear
B	Top of Belt Guard	Caution Do Not Overtension Belts
C	Top of Belt Guard	Caution Do Not Touch Hot Surface
D	Top of Belt Guard	Caution Do Not Operate with Guard Removed
E	Face of Shaft Guard	Caution Do Not Operate with Guard Removed
F	Top of Blade Guard	Blade Rotation Direction
G	Side of Blade Guard	Caution Do Not Operate with Guard Removed
H	Top of Blade Guard	Warning Do Not Change to Larger Blade Guard
I	Console	Warning Reading the manual, Machinery hazard, protect hearing, seeing, headgear, California Proposition 65 message
J	Console	Danger Lethal exhaust gases

CONSOLE CONTROLS

The following is a list of console controls elements:



CONSOLE CONTROL DESCRIPTIONS**Hyundai & Kubota Console**

Decal	Name	Function
A	Ignition Switch	Use to start engine (Glow-OFF-ON-START).
B	Engine Throttle	Controls engine speed.
C	Engine Temp Gauge	Shows temperature of engine.
D	Lifting Points	Used to lift saw.
E	Engine Tachometer	Shows the engine RPM's.
F	Indicator Lights	Indication of Oil Pressure, Charge and Glow Plug.
G	Fuel Gauge	Shows the level of fuel in the fuel tank.
H	Depth Stop	Sets the depth stop for repetitive cuts at the same depth.
I	Radiator	Filled with engine coolant
J	Depth Indicator	Displays cutting depth.
K	T-Handle Knob	Use to tighten operator grip handles.
L	Handle Grip	For operator gripping.
M	Fuel Tank Fill	Fill the fuel tank at this location.
N	Raise/Lower Handle	Controls raising and lowering of blade.
O	Temp Gauge Reset	Must be reset after overheat condition
P	FNR Handle	Used to set direction of saw (Forward/Neutral/Reverse).
Q	Water Valve Lever	Controls water flow to blade guard.
R	Back Panel Knob	1/4 Turn Fastener to remove back.
S	Water Inlet	Hook-up for standard water hose.
T	Turn-To-Lock, Locker	Locks Transmission differential.
U	E-Stop	Stops down engine in an emergency!
V	Point Lift Cable	Allows operator to lift pointer.
W	Neutral Engagement Handle	Engages Transmission, Turn-To-Lock.

Hyundai Only

AA	Keyless Ignition Switch	Use to start engine (OFF-ON-START).
BB	Engine Throttle Switch	Controls engine speed
EE	Engine Tachometer and readout	Shows engine RPM'S and diagnostic information.
FF	Check Engine Light	Lights to indicate a fault.

ENGINE SPECIFICATIONS

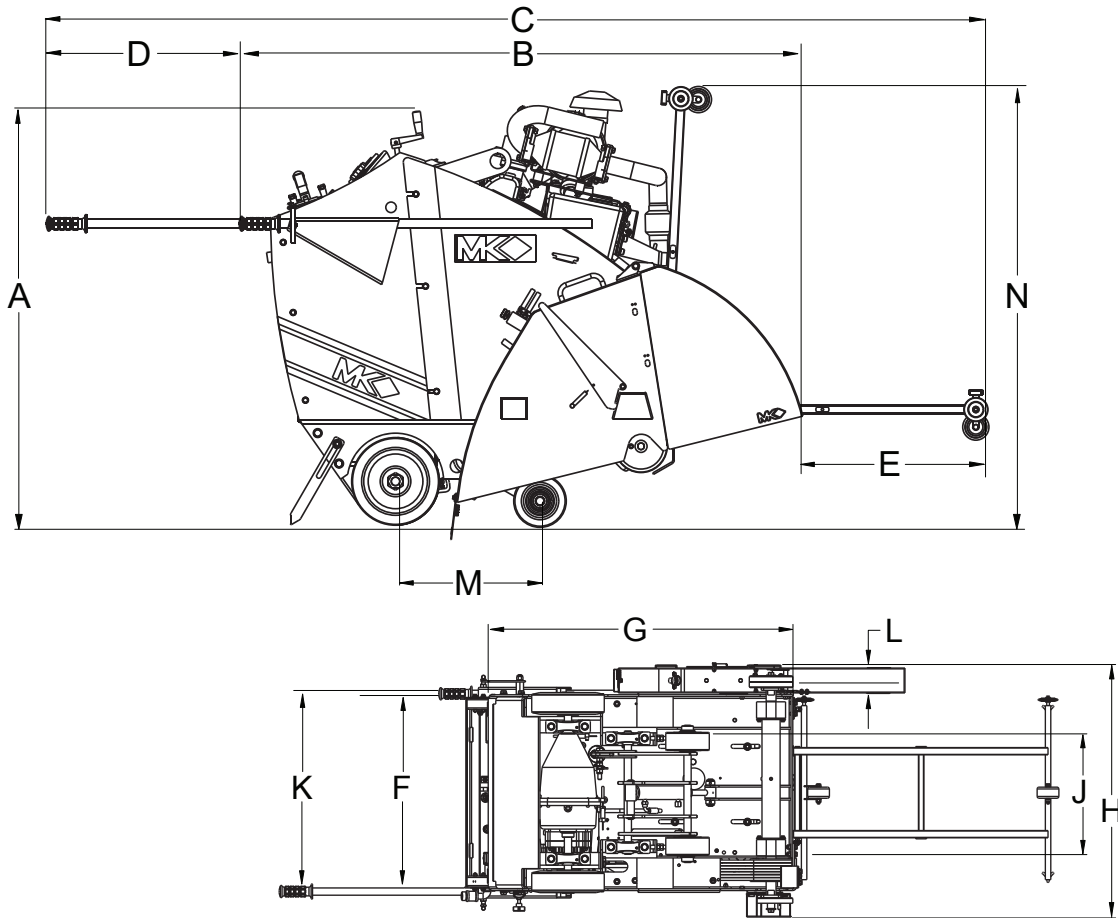
	Hyundai (Gas) Water Cooled			
Engine	The 48Hp Hyundai 416 is a 4 cylinder in-line, DOHC, gasoline fueled, spark-ignited, liquid-cooled engine. It is computer-controlled, fuel efficient, multi-port fuel injected, has low emissions and meets all EPA and CARB requirements. The engine utilizes a check engine light to provide diagnostic codes through a connector. This engine is 1599cc in displacement with a 10.1 to 1 compression ratio. It features a cast iron engine block and a cast aluminum head. This is a super quiet, powerful, low vibration, state of the art engine.			
Power	ZPP-416* (48 Hp)			
Weight	1,120 lbs. (510 kg)			
Model	MK-4018HY	MK-4024HY	MK-4030HY	MK-4036HY
Blade Capacity	18" (457 mm)	24" (610 mm)	30" (762 mm)	36" (914 mm)
Blade RPM	2,300	2,000	1,750	1,450
Depth of Cut	7"	9-1/2"	12-1/2"	15"
Part#	167169-18	167196-24	167196-30	167196-36
	Kubota (Diesel) Water Cooled			
Engine	The 44Hp Kubota V1505-T-E3B is a 4 cylinder in-line, diesel fueled, turbo-charged, liquid-cooled engine. It is fuel efficient, altitude compensating, has low emissions and meets all EPA and CARB requirements. The engine is 1498cc in displacement and features Kubota's Three Vortec Combustion system, which produces an ideal air/fuel mixture that provides increased combustion efficiency and cleaner exhaust.			
Power	V1505-T-E3B* (44 Hp)			
Weight	1,080 lbs. (490 kg)			
Model	MK-4018KB	MK-4024KB	MK-4030KB	MK-4036KB
Blade Capacity	18" (457 mm)	24" (610 mm)	30" (762 mm)	36" (914 mm)
Blade RPM	2,300	2,000	1,750	1,450
Depth of Cut	7"	9-1/2"	12-1/2"	15"
Part#	167420-18	167420-24	167420-30	167420-36

*Engine power ratings are calculated by the individual engine manufacturer and the rating method may vary among engine manufacturers. MK Diamond Products makes no claim, representation or warranty as to the power rating of the engine on this equipment and disclaims any responsibility or liability of any kind whatsoever with respect to the accuracy or the engine power rating. Users are advised to consult the engine manufacturer's owners manual and website for specific information regarding the engine power rating.

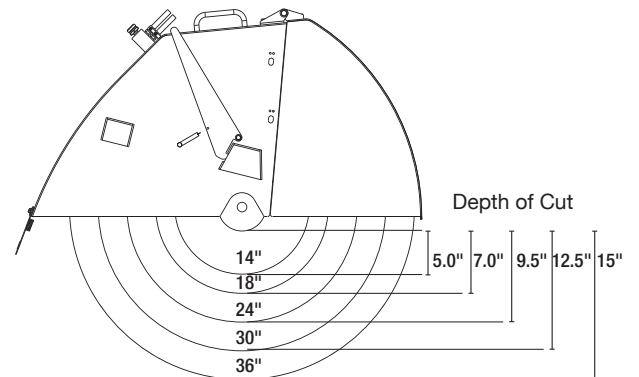
FEATURES

- Totally enclosed and sealed blade shaft with continuous oil bath lubrication system
- Control set provides proportional blade raising/lowering and travel speed with one hand operation
- Quick release, auto-latching bayonet mount blade guard
- Blade guard uses "ride on the blade" water tubes for superior water delivery and blade cooling
- Eaton model 6 Hydrostatic transmission coupled to an MK differentiating trans-axle
- Saw designed for left or right side mounting of blade and blade guard
- Differential lock (for cutting on slippery surfaces) and free wheel/engage controls (to allow the saw to be pushed manually)
- Three-position adjustable solid steel handlebars
- Rigid frame front pointer with high visibility guide wheel for accurate tracking
- 7 3VX V-belt drive from engine to blade shaft
- Travel Speed: 0-220 FPM Forward, 0-100 FPM Reverse
- Fuel Capacity: 5.75 gallons

SAW DIMENSIONS



Item	Description	Inches	(mm)
A	Height	47-1/4"	(1,200)
B	Minimum Saw Length	64-1/4"	(1,632)
C	Maximum Overall Length	107-1/2"	(2,731)
D	Handle Extension	22"	(559)
E	Maximum Pointer Extension	21-1/4"	(540)
F	Frame Width	27"	(686)
G	Frame Length	42"	(1,067)
H	Saw Width	34-3/4"	(863)
J	Outside to Outside Wheel Width - Front	17"	(432)
K	Outside to Outside Wheel Width - Rear	27-1/2"	(699)
L	Blade to Wall	2-1/4"	(57)
M	Wheel Base Length	16-1/2"	(419)
N	Maximum Overall Height (Pointer Up)	50"	(1,270)



INSTRUCTIONS FOR CHANGING BLADE SPEED**WARNING**

Do not exceed blade shaft speed shown for each blade size. Excessive blade speed could result in blade failure and serious personal injury.

**NOTICE**

Changing Blade Guard size **MUST** be accompanied by changing Pulleys to achieve the correct blade speed.

Kit Size	P/N for HY	P/N for KB	Includes	Blade Shaft Speed (Engine RPM = 3000)	Blade Speed (FPM)
18"	167659-18HY	167659-18KB	18" Blade Guard Assembly 4" Flange Set 3.2" Engine Pulley 4.12" Blade Shaft Pulley 7 3VX425 V-Belts	2300 RPM	14" = 8550 16" = 9800 18" = 11000
24"	167659-24HY	167659-24KB	24" Blade Guard Assembly 5" Flange Set 2.8" Engine Pulley 4.12" Blade Shaft Pulley 7 3VX425 V-Belts	2000 RPM	18" = 9600 20" = 10700 22" = 11750 24" = 12800
30"	167659-30HY	167659-30KB	30" Blade Guard Assembly 5" Flange Set 2.8" Engine Pulley 4.75" Blade Shaft Pulley 7 3VX425 V-Belts	1750 RPM	24" = 11100 26" = 12000 28" = 13000 30" = 13900
36"	167659-36HY	167659-36KB	36" Blade Guard Assembly 6" Flange Set 2.8" Engine Pulley 5.75" Blade Shaft Pulley 7 3VX450 V-Belts 36" Frame Corner	1450 RPM	30" = 11500 32" = 12250 34" = 13000 36" = 13750

**NOTICE**

As shown on the chart, some blade guards accept more than one size blade.

BLADE GUARDS AND BLADE SIZES	
BLADE GUARD	BLADE SIZE THAT CAN BE USED WITH BLADE GUARD
18"	14" up to 18"
24"	18" up to 24"
30"	24" up to 30"
36"	30" up to 36"

PRE-OPERATION CHECKLIST

**WARNING**

Before leaving our factory, every machine is thoroughly tested. Follow instructions strictly and your machine will give you long service in normal operating conditions.



Before starting up the machine, make sure you read this entire Operation Manual and are familiar with the operation of the machine.

Machine Cold

1. Check engine oil. See Engine Owner's Manual for type and quantity.
2. Connect battery cables.
3. Check hydrostatic transmission fluid level.
4. Test hydraulic operations. Raise and lower.
5. Check the engine air cleaner.

SCHEDULE MAINTENANCE QUICK REFERENCE

1-2 Hour Operation Checklist

**WARNING**

ALWAYS locate machine on a level surface with the engine "OFF" and the ignition switch set in the "OFF" position before performing any maintenance. Let the machine cool down prior to any service.

1. Check the engine air cleaner hose clamps. Tighten as required.
2. Tension the blade drive V-belts. **DO NOT** overtension.

**WARNING**

Before performing any maintenance, **ALWAYS** locate machine on a level surface with the engine "OFF" and the ignition switch set in the "OFF" position.

Service Daily:

1. Check engine oil level.
2. Check blade guard for damage.
3. Check hoses and clamps for damage or looseness. Tighten or replace as necessary.
4. Check air cleaner for restriction. Replace air filters at regular intervals.

Interval Service:

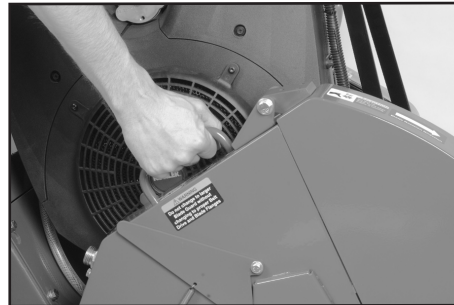
See the Maintenance Schedule Table on Page 25.

**NOTICE**

Before mounting the blade, machine should be turned “OFF”. Clean the blade collars and stub shaft.

BLADE MOUNTING INSTRUCTIONS

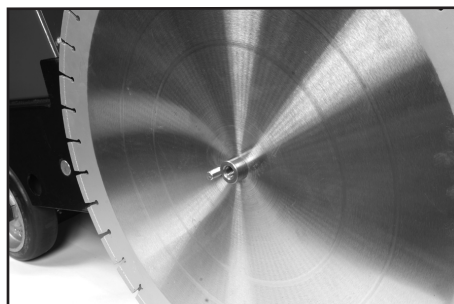
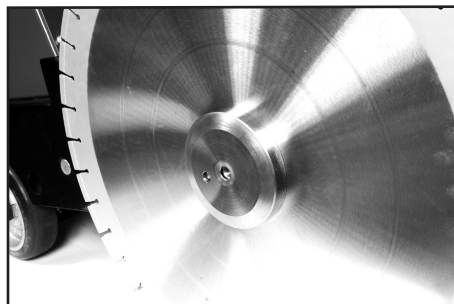
1. Remove Blade Guard.
 - A. Unscrew the hose fitting to disconnect hose.
 - B. Hold the Blade Guard by the handle. Release the inner latch.
 - C. Pull the guard up and off the Saw.

**Unscrew Hose Fitting****Hold Blade Guard**

2. Remove arbor bolt. If blade is mounted on right side saw, the bolt has left hand threads. To remove turn clockwise. If the blade is mounted on left side of saw, bolt has right hand threads. To remove, turn counter-clockwise.
3. Pull off outer flange.

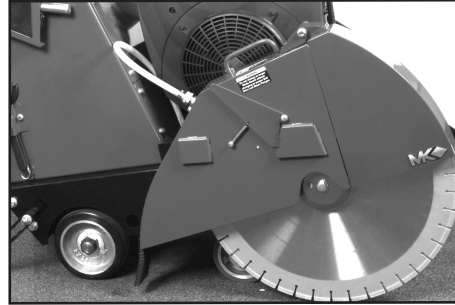
**Remove Arbor Bolt****Pull Off Outer Flange**

4. Install new blade.
5. Slide in the outer flange in place.

**Install New Blade****Slide Outer Flange in place**

BLADE MOUNTING INSTRUCTIONS CONTINUED

6. Tighten the arbor bolt.
7. Install the blade guard in place. Make sure that the guard locks in place and connect the hose.

**Tighten Arbor Bolt****Install Blade Guard****WARNING**

Observe the rotation arrow on blade and **DO NOT** exceed maximum RPM stamped on the blade. To set proper RPM, consult the Blade Guards and Blade Sizes Table on page 16.

**NOTICE**

To meet ANSI safety standards, larger diameter blade flanges are required for large diameter blades. Information is available upon request or for complete safety information refer to ANSI Safety Code B7.1

**NOTICE**

We recommend the use of MK Diamond blades with this saw.

STARTING ENGINE



NOTICE

Read the engine instructions manual before starting.



WARNING

Be sure blade is unobstructed and not resting on ground.



WARNING

Be sure hands and feet are clear of blade.

1. Check engine oil. Add oil if low.
2. Check fuel level. Add fuel if low.
3. Check cooling air intake areas and external surfaces of engine. Make sure surfaces are clean and unobstructed.
4. Check that air cleaner components and all shrouds, equipment covers and guards are in place and securely fastened.

STARTING INSTRUCTIONS

1. Place FNR Handle in **NEUTRAL**.
2. Verify Neutral Engagement Handle is down, in **NEUTRAL**.
3. Pull Engine Throttle Handle out half-way (Kubota only).
4. Start engine by rotating Ignition Switch to the right.



NOTICE

DO NOT crank engine for more than 30 seconds at a time. If engine fails to start, wait about 2 minutes between cranking periods to prevent starter from overheating.



NOTICE

Allow engine to warm up at least 3 minutes before applying load.

5. When engine is warm, throttle may be used out to maximum position.
6. To stop engine, push throttle to idle, rotate ignition switch to “OFF” position.



NOTICE

If the engine has been running hard and is hot, do not shut engine off abruptly. Cool engine by removing load and allowing engine to run idle for 3 to 5 minutes.

SAW GUIDE ALIGNMENT AND ADJUSTMENT



WARNING

This operation is performed with the engine “OFF”!

The front and rear pointers are set in line at the factory. However, the pointers should be checked for proper alignment with the blade after every use. The following are the procedures for aligning the pointers with the blade, with the engine shut off.

1. Using a straight edge, carefully mark a line 12 feet long on a smooth level concrete surface.
2. Place the saw parallel to the line. Lower the blade and center it over the line.
3. **FRONT:** With the blade centered over the line and the saw frame parallel to the line, lower the front pointer assembly and position the pointer over the line.
4. **REAR:** With the blade centered over the line and the saw frame parallel to the line, loose the pointer and adjust up or down and ensure that it touches the line.
5. Finally, roll the saw along the entire length of the line. The saw should lead off no more than 6 inches to the left in 12 feet of forward travel. Adjust the pointer in or out if the lead-off is outside this parameter.
6. Secure hardware.

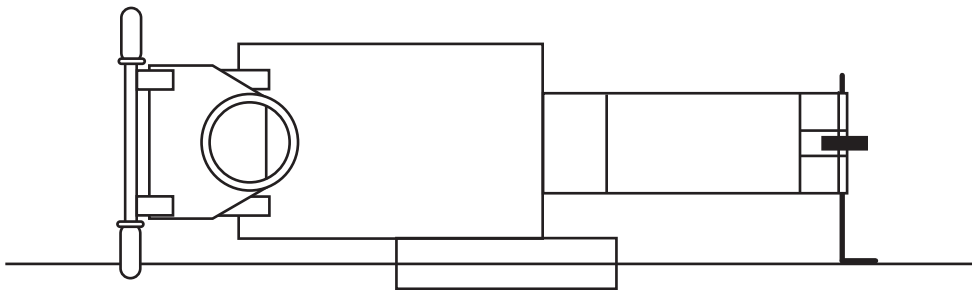


Fig. 17 Pointer Alignment

MANEUVERING THE SAW



WARNING

The blade is spinning whenever the saw is running. Raise the blade as high as possible when maneuvering so that the blade will not strike the pavement.

DRY CUTTING

Dry cutting blades have been specially designed for use with concrete saws. Ensure that the blade you are using is clearly marked for dry cutting.

When dry cutting, it is important to keep the air filter clean. Check the condition of the filter at least every four (4) hours of operation. Clean the pre-filter (wash in soapy water and re-oil) and change the paper filters as soon as it becomes clogged. Concrete dust is very abrasive and will quickly damage internal engine parts, causing loss of compression and eventual engine failure.

Saw only as deep as the specifications and job conditions require. Remember airflow helps to cool the blade during dry cutting. Cutting too deep with one pass, or exerting excessive forward or side pressure can be dangerous. Step cut in increments of 1 inch (25 mm) or less, for the best results.

If reinforced abrasive blades are used for cured concrete, it is usually better to saw only 1 inch deep per pass. If deeper cuts are required, cut in multiple passes.

Thinner Diamond Blades are especially advantageous when cutting dry.

WET CUTTING

The water used on the blade is to provide coolant during cutting and to flush the concrete cutting from the cut.

FNR HANDLE

The FNR Handle moves the saw forward by pushing the lever away from the operator and moves the saw in reverse by pulling the lever toward the operator. The further you push this lever, the faster the saw travels.



WARNING

Before starting the engine, place this lever in **NEUTRAL**.

RAISE/LOWER HANDLE

The raise/lower handle controls the depth of the blade. When pulled back, the electric/hydraulic pump will raise the blade out of the cut. When pushed forward the blade will lower. The lowering speed is faster, the farther forward the lever is pressed.

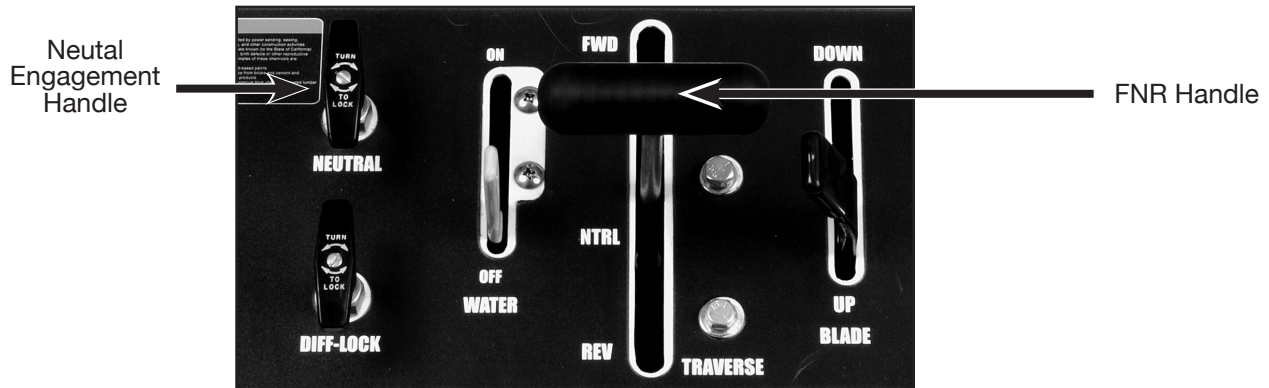
ENGAGING THE DRIVE UNIT

This saw is driven by a hydrostatic transmission. To engage the transmission, **PULL** the Neutral Engagement Handle up and turn to either direction to lock.



NOTICE

DO NOT engage the unit unless FNR Handle (Figure I8) is on **NEUTRAL**.



Engage transmission

To disengage the transmission, twist the Neutral Engagement Handle to unlock, and **PUSH** down.

WATER HOOK UP

Prior to starting the engine, you should hook up the water hose to the Water Inlet (Figure I9) and visually inspect it to make sure that water is flowing to the blade. Hook up the hose to the unit and turn on the water source. Open the water valve.



NOTICE

Water flow volume can be metered by opening the water valve partially.

Next, lift the front of the blade guard and visually inspect the make sure water is flowing out of each of the tubes. If any of the holes is blocked, flush impurities from the tube.



Water Hook Up

DEPTH INDICATOR AND DEPTH STOP

The saw is equipped with a Depth Indicator and a Depth Stop. The Depth Indicator tells you approximately how deep you are in the cut. To set the indicator, you need to first lower the blade until it is just touching the ground and then rotate the Depth Indicator knob to 0.

The Depth Stop is used for several cuts at the same depth. It is set by finding the desired depth and then turning the knob until it is tight. This will prevent cutting below the “locked” level to provide a consistent depth with every cut.



Depth Indicator and Depth Stop

ENGINE

The operation and life of the engine depends on proper maintenance. Do not start engine until engine pre-check is complete. The engine pre-check consists of checking the oil, fuel level, air filter and greasing the wheel, axle, drive unit and arbor bearings. Basic engine maintenance is shown in Maintenance Schedule Table on the next page. For more detailed information, please refer to the Engine Operator Maintenance Manual and Warranty provided with the saw.



NOTICE

When breaking-in a new saw, we recommend running the engine for one hour with no load prior to actual use on the job.

AIR CLEANER

Due to the dusty conditions created by sawing, it is essential to check the engine air cleaner element daily. Remove the element and shake out the accumulated dust and dirt. Wipe out dirt from the inside cover and from the housing. Check the engine manual for washing instructions. Stocking replacement filters is strongly recommended.

ARBOR, AXLE, DRIVE UNIT AND WHEEL BEARINGS

Bearings should be greased according to the Maintenance Schedule Table on the next page.



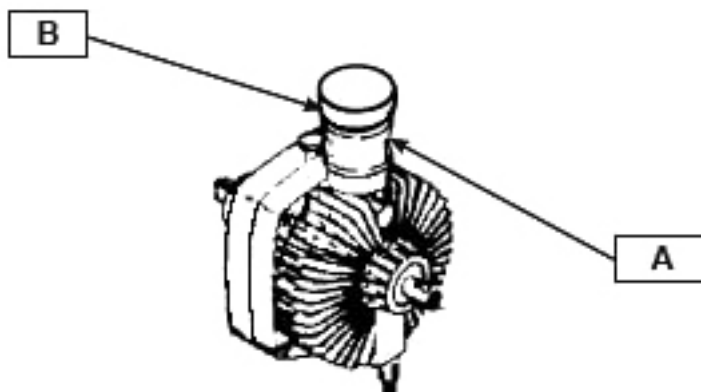
WARNING

DO NOT inspect when the engine is running.

Use of high quality detergent oil of API (American Petroleum Institute) service class SF or SG. Select the viscosity based on the air temperature at the time of operation. For temperatures below 0°F, 5W-20 or 5W-30 oil is recommended. For temperatures above 0°, 10W-30 or 10W-40 oil is recommended. Check your engine manual for other recommendations.

HYDROSTATIC DRIVE UNIT

The fluid shipped in your hydrostatic transmission is a fluid having a viscosity equivalent to SAE 20W20. Mobil fluid 300 or any other oil equivalent to SAE 20W20 is preferred by Eaton Transmission. The expansion tank (Marker "A") is marked for proper fluid level. It should be checked when unit is cold. **DO NOT** allow the unit to run low on oil. If the unit is low, you can add oil by removing the cap (Marker "B").



Expansion Tank and Cap

MAINTENANCE SCHEDULE

MAINTENANCE SCHEDULE	DAILY	25 HOURS	50 HOURS	250 HOURS
Check Oil Level	●			
Check Air Filter	●			
Check Air Intake, Clean if Necessary	●			
Grease Rear Wheel Pillow Blocks		●		
Grease Front Wheel Bearings		●		
Check Transmission Fluid, Add if Low		●		
Check Power Unit Fluid, Add if Low		●		
Service Air Cleaner Element			●	
Change Oil		●		
Change Oil Filter			●	
Check Compression				●
Inspect Fuel Filter, Replace if Dirty				●
Inspect Spark Plugs and Ignition System				●
Inspect Cooling System and Clean				●
Inspect Starting Motor				●

TROUBLESHOOTING

When trouble occurs, be sure to check the simple causes which, at first, may seem too obvious to be considered. Refer to the table below for problems and their possible causes.

TRANSMISSION	Cause Problem	Loose Transmission Linkage	Oil Level	Cooling Fan	Water in Oil Reservoir	Dirty Cooling Fans	Loose Drive Chain
	Transmission jerky when starting	X	X				X
	Transmission operates in one direction	X					
	Transmission operating hot	X	X	X		X	
	Oil color is black			X		X	
	Oil color is milky				X		

ENGINE	Cause Problem	No Fuel	Improper Fuel	Dirt in Fuel Line	Fuse Burned Out	Incorrect Oil Level	Dirty Air Filter	Faulty Spark Plugs
	Will not start	X		X	X		X	X
	Hard starting	X	X	X			X	X
	Stops suddenly	X		X		X	X	
	Lacks power		X	X		X	X	X
	Operates erratically		X	X			X	X
	Knocks or pings		X					X
	Skips or misfires			X			X	X
	Back fires			X			X	X
	Overheats			X			X	X
	High Fuel Consumption						X	X

OTHER	Cause Problem	Improper Blade for the Application	Improper Belt Tension	Damage Caused by External Objects
	Reduced blade life	X	X	
	Excessive belt wear		X	X

THEORY OF DIAMOND BLADES

Diamond blades do not really cut; they grind the material through friction. Diamond crystals, often visible at the leading edge and sides of the rim/segment, remove material by scratching out particles of hard, dense materials, or by knocking out larger particles of loosely bonded abrasive material. This process eventually cracks or fractures the diamond particle, breaking it down into smaller pieces. As a result, a diamond blade for cutting soft, abrasive material must have a hard metal matrix composition to resist this erosion long enough for the exposed diamonds to be properly utilized. Conversely, a blade for cutting a hard, non-abrasive material must have a soft bond to ensure that it will erode and expose the diamonds embedded in the matrix. These simple principles are the foundation of “controlled bond erosion”.



Types of Cutting:

There are two basic types of cutting-Dry or Wet. The choice of which type of blade to use depends on:

- The requirements of the job
- The machine/tool utilizing the diamond blade
- The preference of the operator

In the case of DRY cutting, the overwhelming popularity and quantity of hand-held saws and the flexible nature of MK Diamond blades to professionally handle most ceramic, masonry, stone and concrete materials, make the DRY cutting blade a very attractive tool. When using a DRY blade, the user must be aware of distinct operating practices to ensure optimum performance. DRY cutting blades require sufficient airflow about the blade to prevent overheating of the steel core. This is best accomplished by shallow, intermittent cuts of the material with periods of “free-spinning” (for several seconds) between each cut, to maximize the cooling process.

For WET cutting applications, MK has the exact blade to compliment both the material to be cut and the wet cutting machine to be used. During cutting operations, liberal amounts of water act as a coolant to support the cutting effectiveness and longevity of the WET blade. Additionally, using water adds to the overall safety of cutting operations by keeping the dust signature down.

Know All You Can About the Material You Wish to Cut

ACCESSORIES, ORDERING AND RETURN INFORMATION

Ordering Information

You may order MK Diamond products through your local MK Diamond distributor or, you may order direct from MK Diamond.

NOTE: There is a \$25.00 minimum order when ordering direct from MK Diamond. All purchases must be made using VISA or MasterCard.

When ordering direct from MK Diamond, please have the following information ready before calling:

- The Model Number of the machine
- The Serial Number of the machine
- Where the saw was purchased and when
- The Part Number for the part(s) being ordered
- The Part Description for the part(s) being ordered

All parts may be ordered by calling toll free to **(800) 421-5830** or **(310) 539-5221** and asking for Customer Service. For technical questions, call **(800) 474-5594** or **(310) 257-2845**.

Return Materials Policy

To expedite the service relative to the return of a product purchased through MK Diamond, please observe the following:

NOTE: When returning items, they must have been purchased within the previous twelve (12) months.

- Have the Model Number of the saw
- Have the Serial Number of the saw
- Have the location of where the saw was purchased and when
- Contact Customer Service for approval to return the item(s)
- Follow the packaging instructions in the following section
- Ensure your item(s) are prepaid to the destination

For returned items, call toll free to **(800) 421-5830** or **(310) 539-5221** and asking for Customer Service. For technical questions, call **(800) 474-5594** or **(310) 257-2845**.

Packaging Instructions

- Remove the Blade Guard and Support Angle Assembly
- Dry the saw before shipping
- When packing, include the following: MK-4000, Diamond Blade and Blade Guard
- Package the part in its original container or one of comparable size
- Ensure all parts are secured in the packaging to prevent moving

Authorized Service Centers

For quicker repair time, you may contact MK Diamond Customer Service, toll free at **(800) 421-5830** or **(310) 539-5221** for the Authorized Service Center closest to you. For technical questions, call **(800) 474-5594**.

CONTACT:

Please contact MK Diamond Products, Inc. Customer Service Department with any questions you might have regarding distributors, parts or service.

Telephone: **(800) 421-5830**

Fax: **(310) 539-5158**

E-mail: **Customer_Service@MKDiamond.com**

Customer Service Hours: **Monday through Friday, 6AM-4PM PST**

MK Diamond Products, Inc.

1315 Storm Parkway

Torrance, CA 90501

MK DIAMOND PRODUCTS, INC. LIMITED WARRANTY

MK DIAMOND PRODUCTS, INC. will guarantee every machine they build, to be free from defects in material and workmanship for (1) one year from date of purchase. The obligation of MK DIAMOND PRODUCTS, INC. under this warranty is limited to the repair or replacement of any parts which, under normal use, prove to be defective in material or workmanship. The parts involved or the unit in question should be returned to MK DIAMOND PRODUCTS, INC. or to a point designated by us, transportation prepaid.

This warranty does not obligate us to bear the cost of labor or transportation charges in connection with replacement or repair of defective parts. Likewise, it shall NOT apply to any unit which has been subjected to misuse, neglect or accident. This warranty does NOT apply to any machine which has been repaired or altered outside our factory.

This warranty does NOT obligate MK DIAMOND PRODUCTS, INC., with respect to items not of our manufacture, such as engines, motors, hydraulics, etc., which are subject to their own guarantees and warranties.

We shall in no event be liable for consequential damages or contingent liabilities arising out of failure of any equipment or parts to operate properly.

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MK Diamond may have patents, patent applications, trade marks, copyrights of other intellectual property right covering this product in this document.

This manual **MUST** accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

The information and specifications included in this publication were in effect at the time of approval for printing.

MODEL MK-4000 SERIES
OPERATOR'S MANUAL
DOCUMENT NO. I68118



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